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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,333	03/26/2001	Yatin R. Acharya	F0691	6324

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EXAMINER	
WONG, BLANCHE	
ART UNIT	**PAPER NUMBER**
2667	

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/816,333	ACHARYA ET AL.	
	Examiner	Art Unit	
	Blanche Wong	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-20* is/are allowed.

6)☒ Claim(s) *1-6 and 9-11* is/are rejected.

7)☒ Claim(s) *7,8,12,13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-5,9-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (U.S. Pat No. 6,798,743) in view of Ueno (U.S. Pat No. 6,751,194) and Lefebvre et al. (Pub No. US 2002/0118691 A1).

With regard to cl. 1 and 9, Ma discloses a system for identifying priority level information (packet prioritization processing technique) for a data frame received by a network device 700,800 (router), comprising: (in Fig. 7 and 8)

a plurality of input ports (input interfaces) configured to receive a plurality of data frames (decapsulate from data link frame, col. 9, ln. 45; col. 11, ln. 13), each of the received data frames specifying at least one of a plurality of classes of service (QoS, col. 9, ln. 33-35);

a memory (QoS features that are supported, col. 9, ln. 49; it would have been obvious that there is some memory that stores instructions for classification) configured to store priority level information corresponding to each of the plurality of classes of service (classification, col. 9, ln. 47; col. 11, ln. 13); and

a port vector queue 814 (intermediate data structure)(a single intermediate queu, col. 12, ln. 11) configured to use the action tag (priority P, col. 12, ln. 14) from the action generator for each of the received data frames to access the memory to identify (pre-

processed packets having an associated priority level lower than priority P, col. 12, ln. 13-14) the priority level information associated with the received data frame.

However, Ma fails to explicitly show an action generator configured to generate an action tag for each of the received data frames, or memory that includes one of a plurality of registers or a lookup table, as recited in cl. 1 and 9.

In an analogous art, Ueno discloses an action generator 110 (input processing unit) configured to generate an action tag (calculates output time limit values, col. 6, ln. 2-3) for each of the received data frames. Lefebvre discloses memory that includes one of a plurality of registers (priority values stored in memory registers, para. [0043]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include an action generator that generates an action tag, and memory that includes one of a plurality of registers. The suggestion/motivation for doing so would have been to provide for best effort services, Ueno, col. 1, ln. 59; and to provide data transmission arrangement for prioritized data, Lefebvre, para. [0004]. Therefore, it would have been obvious to combine Ueno with Ma and Lefebvre for the benefit of an action generator that generates an action tag and memory that includes one of a plurality of registers, to obtain the invention as specified in cl. 1 and 9.

With regard to cl. 2, Ma further discloses a plurality of priority queues 710,810 (QoS output queues) associated with each of a plurality of output ports of the network device 700,800 (router).

With regard to cl. 3 and 10, Ma further discloses the port vector queue is further configured to identify one of the priority queues for each of the received data frames based on the identified priority level information (preprocessed, col. 11, ln. 56).

With regard to cl. 4, the combination of Ueno, Ma and Lefebvre discloses the system of claim 1.

Lefebvre further discloses the memory is preprogrammed with the priority level information (Each of the distinct queue priority ... a memory register storing the corresponding associated priority value, a detection means ... , para. [0043]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art that the memory is preprogrammed with the priority level information. The suggestion/motivation for doing so would have been to provide data transmission arrangement for prioritized data, Lefebvre, para. [0004]. Therefore, it would have been obvious to combine Ueno with Ma and Lefebvre for the benefit of a memory is preprogrammed with the priority level information, to obtain the invention as specified in cl. 4.

With regard to cl. 5 and 11, the combination of Ueno, Ma and Lefebvre discloses the system and method of claims 1 and 9 respectively.

Lefebvre further discloses memory includes a plurality of registers (priority values stored in memory registers, para. [0043]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include memory includes a plurality of registers. The

suggestion/motivation for doing so would have been to provide data transmission arrangement for prioritized data, Lefebvre, para. [0004]. Therefore, it would have been obvious to combine Ueno with Ma and Lefebvre for the benefit of a memory includes a plurality of registers, to obtain the invention as specified in cl. 5 and 11.

3. **Claims 1 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (U.S. Pat No. 6,798,743) in view of Ueno (U.S. Pat No. 6,751,194) and Chung (U.S. Pat No. 6,738,384).

With regard to cl. 1 and 9, Ma discloses a system for identifying priority level information (packet prioritization processing technique) for a data frame received by a network device 700,800 (router), comprising: (in Fig. 7 and 8)

a plurality of input ports (input interfaces) configured to receive a plurality of data frames (decapsulate from data link frame, col. 9, ln. 45; col. 11, ln. 13), each of the received data frames specifying at least one of a plurality of classes of service (QoS, col. 9, ln. 33-35);

a memory (QoS features that are supported, col. 9, ln. 49; it would have been obvious that there is some memory that stores instructions for classification) configured to store priority level information corresponding to each of the plurality of classes of service (classification, col. 9, ln. 47; col. 11, ln. 13); and

a port vector queue 814 (intermediate data structure)(a single intermediate queu, col. 12, ln. 11) configured to use the action tag (priority P, col. 12, ln. 14) from the action generator for each of the received data frames to access the memory to identify (pre-

processed packets having an associated priority level lower than priority P, col. 12, ln. 13-14) the priority level information associated with the received data frame.

However, Ma fails to explicitly show an action generator configured to generate an action tag for each of the received data frames, or memory that includes one of a plurality of registers or a lookup table, as recited in cl. 1 and 9.

In an analogous art, Ueno discloses an action generator 110 (input processing unit) configured to generate an action tag (calculates output time limit values, col. 6, ln. 2-3) for each of the received data frames. Chung discloses memory that includes one of a lookup table (look-up tables of the memory device, col. 14, ln. 39).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include an action generator that generates an action tag, and memory that includes one of a lookup table. The suggestion/motivation for doing so would have been to provide for best effort services, Ueno, col. 1, ln. 59; and to provide for an improved technique for increasing the data packet handling capacity, Chung, col. 2. ln. 43-44. Therefore, it would have been obvious to combine Ueno with Ma and Chung for the benefit of an action generator that generates an action tag and memory that includes one of a lookup table, to obtain the invention as specified in cl. 1 and 9.

With regard to cl. 6, the combination of Ueno, Ma and Chung discloses the system and method of claim 1.

Chung further discloses a memory stores a lookup table (look-up tables of the memory device, col. 14, ln. 39).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a memory that stores a lookup table. The suggestion/motivation for doing so would have been to provide for an improved technique for increasing the data packet handling capacity, Chung, col. 2. ln. 43-44. Therefore, it would have been obvious to combine Ueno with Ma and Chung for the benefit a memory that stores a lookup table, to obtain the invention as specified in cl. 6.

Allowable Subject Matter

4. **Claim 14-20** are allowed.

5. Claims 7,8,12,13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW
November 18, 2005

CHI PHAM
SUPERVISORY PATENT EXAMINER
1/4/05